

- 5 -

wherein said intersection is used to provide a visual indication of a relationship between said first and second items or groups of data that can be more readily ascertained by viewing the displayed graphic image.

Typically said means for generating a first ribbon is capable of generating a plurality of said first ribbons so as to form a first ribbon group, and said means for attaching a first item or group of data is capable of attaching a plurality of first items or groups of data to said respective first ribbons in said first ribbon group. Typically said means for generating a second ribbon is capable of generating a plurality of said second ribbons so as to form a second ribbon group, and said means for attaching a second item or group of data is capable of attaching a plurality of second items or groups of data to said respective second ribbons in said second ribbon group.

Advantageously said means for generating an intersection is capable of generating a plurality of intersections which together with the ribbons form a weave of said first and second ribbon groups.

Preferably said system includes a means for querying a knowledge base for data to be represented by one of the ribbons. Preferably said system includes a means for a user to enter the relationship between the said first and second items or groups of data.

Preferably said system also includes a means for a user to input information to be represented by one of the ribbons. Preferably said system includes a means for querying a knowledge base for the relationship between the said first and second items or groups of data.

In order to facilitate a more comprehensive understanding of the nature of the invention a preferred embodiment of the method and system for visually representing the relationships between items or groups of data will now be

- 6 -

described in detail, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 illustrates a computer generated "weave" pattern of first and second ribbon groups in accordance with a preferred embodiment of the invention;

5      Figure 2 illustrates several different forms that intersections of the ribbons can take and typical meanings ascribed thereto;

Figure 3 is a flow chart illustrating a preferred method of creating a weave map similar to that illustrated in Figure 1;

10     Figure 4 is a block diagram illustrating an ideal software architecture for a typical medical application which employs the DataWeaver method and system in accordance with the invention;

Figure 5 is a functional block diagram illustrating a typical clinical computer system that could employ the software architecture of Figure 4;

15     Figure 6 illustrates a single page Graphical User Interface (GUI) which embodies the DataWeaver method;

Figure 7 is an enlargement of the upper left of the single page GUI of Figure 6, showing the names of diseases and symptoms;

Figure 8 is an enlargement of the lower left of the single page GUI of Figure 6, showing features relating to diagnosis and patient information;

20     Figure 9 is an enlargement of the lower right of the single page GUI of Figure 6, showing a lower part of features relating to treatment and monitoring; and,

- 7 -

Figure 10 is an enlargement of the upper right of the single page GUI of Figure 6, showing an upper part of the features relating to treatment and monitoring.

The present invention provides an improved method of visualising relationships between sets and individual pieces of information in a computer generated image or map. It has particular advantages for the indication of significant intersections between data items or groups and is thus highly suitable for illustrating computer data handling and data-minding applications, for example, within the medical field for diagnosis and for treatment planning, management and monitoring. Throughout the following description a preferred embodiment 5 of the invention will be described within the medical field, however it is to be understood that the method and system of the invention is not limited to this application and can be applied generally to multi-level information-based systems, such as monitoring of complex engineering plants, data flow in an algorithm or device, ecology, event planning, or geophysics. The computer 10 generated image or map created in accordance with the invention may also be used as a basis for a Graphical User Interface (GUI). 15

The method involves visualising each item (or group) of data as a ribbon, typically colour coded to indicate the group or class of data which it represents. The direction of each ribbon can be adjusted in order to enable the appropriate 20 intersections with other ribbons of data. The intersections between the various data ribbons use the analogy of weaving to generate a "weave" pattern of multi-coloured "ribbons" as illustrated in Figure 1. Hence, the method of visually representing in a computer generated image the relationships between items or groups of data will henceforth be referred to as the DataWeaver method for 25 convenience.

Figure 1 illustrates a weave pattern or map which visually represents part of a patient record in a clinical system as developed using a preferred embodiment of the DataWeaver method in accordance with the invention. Generation of a full patient record will be described in more detail below with reference to

GOVERNMENT OF CANADA